HERON BRIDGE Spanning the Clark Fork River and Cabinet Gorge On Heron Road Heron Vicinity Sanders County Montana

HAER No. MT-142

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

HISTORIC AMERICAN ENGINEERING RECORD Rocky Mountain System Support Office National Park Service P. O. Box 25287 Denver, Colorado 80225-0287

Heron Bridge HAER No. MT-142 (page 1)

HISTORIC AMERICAN ENGINEERING RECORD HERON BRIDGE

I. INTRODUCTION

Historian:

Location:	Heron Bridge Spanning the Clark Fork River and Cabinet Gorge on Heron Road Heron vicinity Sanders County Montana
Quad:	Heron, Montana (1982)
UTM:	11/576121/5324207
Date of Construction:	1920 (relocated 1952)
Present Owner:	Sanders County Thompson Falls, Montana
Present Use:	Highway Bridge
Significance:	Constructed in eastern Washington in 1920, Montana's Sanders County relocated the Heron Bridge to its existing site in 1952. It is the only example of a cantilevered deck truss bridge in Montana. It is also one of only a very few remaining deck truss bridges in the state. The bridge was not significantly modified when it was relocated to Montana and the crossing site was modified to accommodate the bridge. It retains its original form and appearance and is an excellent representative of that particular style of deck truss

bridge.

October 2010

Jon Axline, Montana Department of Transportation

Heron Bridge HAER No. MT-142 (page 2)

II. HISTORY

Long the territory of the Kootenai, Salish, and Pend d'Oreille Indians, the western part of Sanders County, including the Heron Bridge site, was explored in October 1809 by North West Fur Company factor David Thompson. He described Salish Indians fishing for "herring" on the Clark Fork River near the bridge site. Several weeks later he reported Indians fishing on "Herring Rapid" which was located near the existing bridge.

A fine but cold frosty night and morng – Rose early and by 7:10 AM set off and went down the high Hill into the thick Woods, which presently brought us to the River Side., which is hear only abt 60 yds. wide, with a deep rapid Current. We went along the Beach, Composed of ugly, bad Stones, 'till 9½ AM when we went into the Woods . . . at 9:40 stopped at a strong Rapid where we found 3 tents of Saleesh fishing Herrings with a small dipping net – of these fish they take great quantities, they gave us abt 20 of them for which I paid them a foot of [tobacco].

Thompson referred to the area as Herring Rapids in three more journal entries spanning the next year. In November 1809, Thompson built a trading post, called Saleesh House, on the Clark Fork River across from the mouth of the Thompson River, about 45 miles southeast of the bridge. In January 1826, Hudson's Bay Company trapper John Work visited the area of the bridge and referred to it as "Heron Rapid" in his journals After the North West and Hudson's Bay companies merged in 1821, they continued to exploit the fur resources of northwestern Montana to the exclusion of American trappers and traders.¹

The Pacific Northwest and northwest Montana was firmly within the sphere of the Canadian fur companies after Thompson's sojourn through the region in the early 1800s. At the Convention of 1818, the United States and Great Britain agreed to jointly occupy the territory south of the 49th parallel and west of the Continental Divide to the Pacific Ocean. Although the agreement allowed the United States access to the region, it remained largely under the dominance of the Canadians for decades. Finally, in 1846, the US annexed the region south of the 49th parallel and the area encompassing the Heron Bridge officially became part of Oregon Territory in 1848, Washington Territory in 1860, and Montana Territory in 1864.²

Despite its inclusion within the boundaries of the United States, American activity in the Heron area was slow to occur. The area had largely been trapped out by the Canadians and there were no known gold deposits in the remote region. There was some activity by American trappers, but most of it occurred well to the south and east of the existing site of the bridge. It was one of the few areas in northwest Montana that was not included within the area that Isaac Stevens and John Mullan explored in search of a northern transcontinental route in the 1850s. It wasn't until the discovery of gold in southwestern Montana in 1862 and rumors of gold in the Kootenai country north of the bridge began to circulate that significant numbers of Euro-Americans circulated through the region.

Heron Bridge HAER No. MT-142 (page 3)

The Northern Pacific Railway constructed its transcontinental main line through the Heron area in 1883, establishing a station there that year named after the nearby rapids on the Clark Fork River. Indeed, the railroad designated Heron as the division point between the Rocky Mountain and Pend d'Oreille divisions. The NPRR built a roundhouse, engine shop, and sawmill there in 1884. The population of Heron included around 400 people, a post office, general stores, two hotels and seven saloons. An 1884 newspaper article described Heron,

At Heron, the railroad company has built a hotel that for thoroughness in all its appointments is perhaps superior to any dining house owned by the company on its entire line All trains have the car wheels tapped to test for flaws, all change locomotive crews; all passengers eat; many stroll around to take in the romantic scenes, and while doing so they are frequently invited by the spiders to "walk into my parlor, Mr. Fly." A gang of those expert bunko sharps infest the railway yards away up there amid the solitudes

Local promoters boasted of the community's future as a supply point for mining districts in the nearby Cabinet Mountains and a center for the lumber industry in northwestern Montana. Unfortunately that initial prosperity did not last. In 1888, the NPRR relocated the division point about 25 miles to the northwest to Hope, Idaho and Heron's post office then closed. Although it reopened in 1891, Heron was never the same as it was during the halcyon days as a railroad division point. The community hung on, narrowly avoiding destruction in the 1910 forest fires and maintaining an active commercial district until 1921 when a fire devastated it. Heron survived two economic depressions and World War II, enjoying a modest resurgence in the late twentieth century as a recreational area.³

The General Land Office surveyed the area encompassing the Heron Bridge in the summer of 1903. The map shows the county road between Cabinet and Heron paralleling the railroad tracks on the south side of the river on the approximate alignment of existing Montana Highway 200. Heron, by then, consisted only of a store, post office, and a scattering of other buildings. By 1910, widower Charles H. Dunn and his children, Cecil and Beatrice, lived on the south side of the Clark Fork River at the site of the future bridge. Dunn emigrated to the United States from Great Britain in 1903 and had arrived in this Heron area by 1905, obtaining the patent to the homestead in November 1913. He listed his occupation in the 1910 census as a farmer. Dunn and his family had left the area by 1920. 4

Heron Bridge

The Heron Bridge originally crossed the Pend Oreille River near the community of Metaline Falls in far northeastern Washington. From 1915 to 1918, Pend Oreille County operated a ferry at the site. In 1919, however, the county awarded a franchise to J. H. Sexsmith and the Metaline Falls Bridge Company to operate a toll bridge at the crossing, which was then on a county road. Sexsmith and the other owners of the company were able to raise \$8,000 in private donations, and convince the county commissioners and the Forest Service to fund the remaining cost of the

Heron Bridge HAER No. MT-142 (page 4)

structure. The company hired the Coast Bridge Company of Seattle to build the bridge. The county dedicated the new bridge on November 11, 1920, when Sexsmith cut the ribbon and led a procession of school children carrying large flags to the middle of the bridge. In 1928, the Washington Highway Department designated the road from the Canadian border to Newport, Washington as State Highway 20. The following year, it purchased the Metaline Falls Bridge from the toll company for \$95,000. The highway department strengthened the deck of the bridge in 1948 and, for a time, it functioned as a one-way facility.⁵

In 1951, the highway department determined the old bridge obsolete and contracted with the Hagman Company of Spokane to construct a new bridge adjacent to it. The contract included a stipulation that gave the old bridge to Hagman "to dispose of as he wished." About that same time, the Sanders County Commissioners decided to erect a new bridge across the Clark Fork River to shorten the distance between that area and other communities on US Highway 10-A (now Montana 200) in northwestern Montana. Prior to the relocation of the bridge to its existing site, local residents crossed the Clark Fork either by a ferry or a wooden footbridge. The Bureau of Public Roads' reconstruction of Montana Highway 200 on the north side of the river also made the presence of a bridge at Heron critical to the area. The residents of Sanders County approved a bond issue for the project and the commissioners hired the engineering consulting firm of Walter J. Woodward and Associates of Spokane to design the structure.⁶

What the commissioners had not foreseen, however, was the impact the recently completed Cabinet Gorge Dam would have on the proposed bridge site upriver. When it became clear that Sanders County would not have enough money to build the type of bridge necessary to span the new reservoir, it and Woodward began to look for alternate solutions to the problem. Serendipitously, Woodward read a copy of the *Spokane Daily Chronicle* that described the Metaline Falls project and reported that the old bridge would be dismantled and removed from the site. Woodward contacted Hagman and they determined that the old bridge would work at the crossing in Montana. He initiated negotiations with Hagman on behalf of Sanders County and was able to secure the bridge for use in Montana at a cost of \$322,000. The Washington Water Power Company, owners of the Cabinet Gorge Dam, agreed to pay the cost of relocating the old bridge to Montana. Sanders County contracted with the Hansen and Parr Construction Company of Spokane to build the foundation for the bridge at the new site.⁷

The company began construction of the concrete piers and abutments in August 1951 and completed the project in June 1952. Meanwhile, Roy L. Bair and Company began dismantling the old bridge and prepared it for shipment to Heron on the Northern Pacific Railway. The contractor disassembled the bridge in the same sequence that it had been originally constructed. All the rivets "were sheared off, loaded onto trucks and moved to Heron." The Bair Company coordinated their work with the rising waters of the reservoir. Consequently, the bridge was in the process of being reassembled in Montana, while parts of it were still being dismantled at Metaline Falls. Bair completed the relocation and reassembling of the bridge in November 1952,

Heron Bridge HAER No. MT-142 (page 5)

and Sanders County Surveyor John Brauer officially dedicated the structure on November 30th, "marking the completion of a modern-day engineering feat."

III. THE BRIDGE

A. DESCRIPTION

The Heron Bridge is a three-span riveted deck truss cantilever bridge that spans Cabinet Gorge. The structure includes a wood trestle approach span on the southwest end and a timber stringer approach on the northeast end of the structure. The 695-foot cantilevered combination Pennsylvania and Warren truss bridge is 19.5 feet wide with an 18-foot road width. The slightly arched deck rises about 15 feet from the northeast end to the southwest end. The 120-foot main span rests on two concrete piers set deep in Cabinet Gorge Reservoir with only the cap-bar above water.

Substructure

There are two reinforced concrete abutments and six reinforced concrete piers numbered consecutively from northwest to southeast along the tangent of old US Highway 10. All six piers are solid structures with two extended cylindrical caps upon which the trusses rest.

Abutment No. 1 (southwest) is a solid reinforced concrete structure that is bolstered by 8 x 8 and 10 x 10 treated milled wood beams and "whatever was handy" wood shims.

Bent No. 1 consists of two reinforced concrete columns connected by a transverse concrete beam at the top of the columns. The southwest end of Span No. 1 rests on top of the beam connecting the columns. Partially encased cast steel rocker bearings are bolted to the top of the beam. The columns are six-sided and consist of poured concrete. The columns are wider at the bottom than they are at the top.

Pier No. 1 consists of two reinforced columns anchored deep into the bed of the reservoir. Just the cross beam connecting the two columns is located above the water surface of the reservoir. Cast steel rocker bearings are bolted to the top of the beam and provide the connection between the superstructure and the pier.

Pier No. 2 consists of two reinforced columns anchored deep into the bed of the reservoir. Just the cross beam connecting the two columns is located above the water surface of the reservoir. Cast steel rocker bearings are bolted to the top of the beam and provide the connection between the superstructure and the pier.

Bent No. 2 is a solid reinforced concrete structure with two cylindrical concrete "knobs" extending 2-feet above the extended cap. The pier is 60-feet in height. The caps are 5' 6" in

Heron Bridge HAER No. MT-142 (page 6)

diameter and spaced ten-feet apart. The pier is 24-feet wide at the bottom and tapers to 21' 6" at the top. In profile, the pier is 10-feet thick at the base and tapers to 5' 8" at the cap.

Bent No. 3 is a paired reinforced concrete columns. The columns are wide at the bottom and taper towards the top. They are connected at the top by a transverse reinforced concrete beam. The north end of Span No. 3 is connected to the bent by cast steel rocker bearings bolted to the top of the beam.

Abutment No. 2 (northeast) is a solid reinforced concrete structure that is bolstered by 8×8 and 10×10 treated milled wood beams and "whatever was handy" wood shims.

Superstructure

The Heron Bridge is a steel three-span, cantilevered Pennsylvania deck truss structure. The bridge rests on concrete abutments and piers. The bridge has an overall length of 696 feet and consists of two 168-foot spans, two 120-foot spans, and a 120-foot center span. The bridge is 19.5 feet wide with a roadway width of 18 feet. A continuous span treated timber trestle-type approach span is located on the southwest end of the bridge and two timber stringer approach spans carry the road to the main spans on the northeast end of the bridge.

Approach Span No. 1 (southwest) is a continuous span treated timber trestle-type structure. It is 100 feet in length and 19.5 feet wide with a roadway width of 18 feet. It was constructed in 1952. The trestle consists of fourteen timber piles (seven on each side of the structure) that are connected by timber cross braces. The floor beams rest on top of the posts and are milled. The deck is supported by fifteen lines of pressure treated stringers. The wood deck has an asphalt overlay.

The five truss spans of the bridge consist of two 168-foot spans (Nos. 1 and 5), two 120-foot cantilever spans (nos. 2 and 4), and a the 120-foot Warren truss main span (No. 3). The spans are 19.5 feet wide with a roadway width of 18 feet.

Truss Span No. 1 is a cantilever span that is 168 feet long. The span consists of four panels, each 42 feet in width. The upper and lower chords are laced channel sections with batten plates. The vertical members are laced channel sections and the intermediate verticals are paired angle sections with batten plates. Diagonals are angle sections with batten plates and laced channel sections. The bottom struts are laced angle sections, while the bottom lateral and sway braces are angle sections. Top sway braces are angle sections. The subdivided members of the truss are paired angle sections with batten plates. The chords, verticals, and diagonals are connected at the panel points by gusset plates. The span's deck is supported by four riveted steel I-beam floor beams and 15 lines of steel I-beam stringers.

Truss Span No. 2 consists of a 120-foot cantilever section. The cantilevers are Pennsylvania trusses and the center section is a Warren truss. The cantilevers are each six panels with each

Heron Bridge HAER No. MT-142 (page 7)

panel 20 feet long. The cantilever sections are comprised as follows: The upper and lower chords are laced channel sections with batten plates. The vertical members are laced channel sections and the intermediate verticals are paired angle sections with batten plates. Diagonals are angle sections with batten plates and laced channel sections. The bottom struts are laced angle sections, while the bottom lateral and sway braces are angle sections. Top sway braces are angle sections. The chords, verticals, and diagonals are connected at the panel points by gusset plates. The span's deck is supported by four riveted steel I-beam floor beams and 15 lines of steel I-beam stringers.

Truss Span No. 3 is the center cantilever section. It is a Warren deck truss that consists of five panels each 24 feet in length. The upper and lower chords are laced channel sections with batten plates. The vertical members are laced channel sections and the diagonals are laced angle sections with batten plates. The bottom struts are laced angle sections, while the bottom lateral and sway braces are angle sections. Top sway braces are angle sections. The chords, verticals, and diagonals are connected at the panel points by gusset plates. The span's deck is supported by four riveted steel I-beam floor beams and 15 lines of steel I-beam timber stringers. The subdivided members of the truss are paired angle sections with batten plates.

Truss Span No. 4 consists of a 120-foot cantilever section. The cantilever is a Pennsylvania truss. The cantilever is six panels with each panel 20 feet long. The cantilever section is comprised as follows: The upper and lower chords are laced channel sections with batten plates. The vertical members are laced channel sections and the intermediate verticals are paired angle sections with batten plates. Diagonals are angle sections with batten plates and laced channel sections. The bottom struts are laced angle sections, while the bottom lateral and sway braces are angle sections. Top sway braces are angle sections. The chords, verticals, and diagonals are connected at the panel points by gusset plates. The span's deck is supported by four riveted steel I-beam floor beams and 15 lines of steel I-beam stringers.

Truss Span No. 5 is a cantilever span that is 168 feet long. The span consists of four panels, each 42 feet long. The lower and upper chords are laced channel sections with batten plates. The vertical members are laced channel sections and the intermediate verticals are paired angle sections with batten plates. Diagonals are angle sections with batten plates and laced channel sections. The bottom struts are laced angle sections, while the bottom lateral and sway braces are angle sections. Top sway braces are angle sections. The subdivided members of the truss are paired angle sections with batten plates. The chords, verticals, and diagonals are connected at the panel points by gusset plates. The span's deck is supported by four riveted steel I-beam floor beams and 15 lines of steel I-beam timber stringers.

Approach Span No. 2 (northeast) is a treated timber span. The timber deck is supported 15 lines of treated timber stringers. The north ends of the stringers rest on the concrete abutment and the south end on Bent No. 3.

Heron Bridge HAER No. MT-142 (page 8)

The bridge has a wood deck consisting of nailers and wood planks with an asphalt overlay. The deck is flanked by wood curbs and guardrails installed by Sanders County in 1994. The guardrails posts are steel I-beams bolted to the deck of the bridge. The existing rails are steel ribbon-type rails that are mounted on steel I-beams that are bolted to the original steel I-beam guardrail posts. Steel pipe handrails run the length of the bridge on both sides of the deck. A bronze plaque mounted on a steel post at the southwest end of the bridge reads in raised letters: "Heron Bridge/1952/Sanders County, Montana/Commissioners/M.C. Sutherland/H.E. Smith/Ed Hazelton/Consulting Engineer/Walter L. Woodward/Contractors/Hansen & Parr Co./Roy L. Bair & Co."

Material

The original construction plans and records for the bridge have not survived and it is not known the tonnage of the steel truss spans or the amounts of other materials used when the bridge was originally constructed in Washington State in 1920 or when it was relocated to its existing site in 1952.

B. MODIFICATIONS

In 1994, Sanders County removed the original guardrails of the structure and replaced them with the existing guardrails. Other than routine maintenance of the deck, there have been no other modifications made to the structure's trusses or foundations since its relocation to this site in 1952.

C. OWNERSHIP AND FUTURE

The Heron Bridge is currently owned and maintained by Sanders County. The Montana Department of Transportation (MDT) programmed this off-system bridge for replacement in 2009. Mitigation for National Register of Historic Places-eligible bridges are treated under the terms of a Programmatic Agreement (PA) that was implemented in 2007.

IV. BIOGRAPHICAL MATERIAL

N/A

V. FOOTNOTES

1. Michael P. Malone, Richard B. Roeder, and William L. Lang, *Montana: A History of Two Centuries*, (Seattle: University of Washington Press, 1992), 44, 45, 47; Merrill G. Burlingame, *The Montana Frontier*, (Helena: State Publishing Company, 1942), 14-17; C. Margaret White, *Journals of David Thompson Relating to Montana and Adjacent Regions, 1808-1812*, (Missoula: Montana State University Press, 1950), 46, 59, 179; *Montana Place Names: From Alzada to Zortman*, (Helena: Montana Historical Society Press, 2009), 122.

- 2. Dorothy O. Johansen and Charles M. Gates, *Empire of the Columbia: A History of the Pacific Northwest*, (New York: Harper & Brothers, 1957), 191; Burlingame, *The Montana Frontier*, 36, 387.
- 3. Louis Tuck Renz, A History of the Northern Pacific Railroad, (Fairfield, Washington: Ye Galleon Press, 1980), 95, 99, 161; Mona Leeson Vanek, Behind These Mountains: Noxon, Heron, Trout Creek, Bull River, Smeads, Volume I (Colville; Washington, Statesman-Examiner,
- 1986), 25, 27; Vanek, *Ibid*, Volume III, 88; "Heron Celebrates 100th Birthday," *The Missoulian*, 5 July 2007; Lorraine DuFresne, *A Heritage Remembered: Early and Later Days in the History of Western Sanders County*, (Thompson Falls: Sanders County Ledger, 1976), 179; Roberta Carkeek Cheney, *Names on the Face of Montana: The Story of Montana's Place Names*, (Missoula: Mountain Press Publishing, 1990), 135; *Montana Place Names*, 122.
- 4. Montana Land Tract Books, Volume 198, Montana Historical Society, Helena, Montana; General Land Office Map: Township 27 North, Range 34 West, 8 March 1905, Montana Department of Natural Resources and Conservation, Helena, Montana; Unites States Census Records: Sanders County, Montana, 1900-1930, available at www.ancestry.com.
- 5. John J. Lemon, "Metaline Falls Bridge Sees Service in Montana," *Spokane Daily Chronicle*, 27 November 1952; "Old Bridge Again in Service," *Metaline Falls News*, 17 January 1952; Faith McClenny, "Metaline Falls Bridge," Unknown publication, no date.
- 6. Metaline Falls Bridge Sees Service in Montana," *Spokane Daily Chronicle*, 27 November 1952; "Old Bridge Again in Service," *Metaline Falls News*, 17 January 1952; Vanek, *Behind These Mountains* I, 243; Vanek, *Ibid* II, 146; "Heron Celebrates 100th Birthday," *The Missoulian*, 5 July 2007; "Notice of Sale of County Bridge Bonds," *Sanders County Independent Ledger*, 3 January 1951.
- 7. "Minneapolis Firm Awarded Heron Bridge Bond Issue," Sanders County Independent Ledger, 17 January 1951; Ibid, 21 March 1951; "Proceedings of the Board of County Commissioners of Sanders County," Sanders County Independent Ledger, 21 March 1951.
- 8. John J. Lemon, "Metaline Falls Bridge Sees Service in Montana," *Spokane Daily Chronicle*, 27 November 1952; "Heron Bridge to be Dedicated Sunday at 11:00 A.M.," *Sanders County Independent Ledger*, 19 November 1952; "Heron Bridge Officially Dedicated," 26 November 1952.

I. BIBLIOGRAPHY

A. BOOKS

Heron Bridge HAER No. MT-142 (page 10)

- Axline, Jon. Conveniences Sorely Needed: Montana's Historic Bridges. (Helena: Montana Historical Society, Forthcoming 2005).
- Burlingame, Merrill G. *The Montana Frontier*. (Helena: State Publishing, 1942).
- Cheney, Roberta Carkeek. Names on the Face of Montana: The Story of Montana's Place Names. (Missoula: Mountain Press Publishing, 1990).
- Chittenden, Hiram Martin and Alfred Talbot Richardson. *Life, Letters and Travels of Father Pierre-Jean DeSmet, S. J.* Four volumes (New York: Francis P. Harper, 1905).
- Condit, Carl W. American Building: Materials and Techniques from the Beginning of the Colonial Settlements to the Present. Second Edition. (Chicago: The University of Chicago Press, 1982).
- DuFresne, Lorraine. A Heritage Remembered: Early and Later Days in the History of Western Sanders County. (Thompson Falls: Sanders County Ledger, 1976).
- Federal Writers' Project. *Montana: A State Guide Book.* (Helena: Montana Department of Agriculture, Labor and Industry, 1939).
- Johansen, Dorothy O. and Charles M. Gates. *Empire of the Columbia: A History of the Pacific Northwest.* (New York: Harper & Brothers, 1957).
- Lewis, William S. and Paul C. Phillips, eds. *The Journal of John Work*. (Cleveland: Arthur H. Clark Company, 1923.
- Malone, Michael, Richard Roeder and William Lang. *Montana: A History of Two Centuries*. Rev. ed. (Seattle: University of Washington Press, 1991).
- Minnesota, North and South Dakota, and Montana Gazetteer. (St. Paul: R. L. Polk & Company, 1886-1919).
- Quivik, Fredric L. *Historic Bridges in Montana*. (Washington, DC: Department of the Interior, 1982).
- Renz, Louis Tuck. *The History of the Northern Pacific Railroad*. (Fairfield, WA: Galleon Press, 1980).
- Robertson, Dale B. *Encyclopedia of Western Railroad History*. Volume II (Dallas: Taylor Publishing, 1991).

- Schwantes, Carlos Arnaldo. Long Day's Journey: The Steamboat & Stagecoach Era in the Northern West. (Seattle: University of Washington, 1999).
- Spritzer, Don. Roadside History of Montana. (Missoula: Mountain Press Publishing, 1999).
- Steere, M. J. *History of the Montana State Highway Department*, 1913 1942. (Helena: State Highway Commission, 1943).
- Vanek, Mona Leeson. Behind These Mountains: Noxon, Heron, Trout Creek, Bull River, Smeads. Three volumes (Colville, Washington: Stateman-Examiner, 1986).
- Waddell, J. A. L. Bridge Engineering. Two volumes. (New York: John Wiley & Sons, 1925).
- Water Resources Survey: Mineral and Sanders Counties, Montana. Two volumes (Helena: Montana Water Resources Board, 1969).
- White, M. Catherine. *Journals of David Thompson Relating to Montana and Adjacent Regions*. (Missoula: Montana State University Press, 1950).
- Wolle, Muriel Sibell. Montana Pay Dirt. (Athens, Ohio: Sage Books, 1963).

B. PERIODICALS

C. NEWSPAPERS

- "Heron Bridge Officially Dedicated." Sanders County Independent Ledger, 26 November 1952.
- "Heron Bridge to be Dedicated Sunday at 11:00 A.M." Sanders County Independent Ledger, 19 November 1952.
- "Heron Celebrates 100th Birthday." *The Missoulian*, 5 July 2007.
- Lemon, John J. "Metaline Falls Bridge Sees Service in Montana." *Spokane Daily Chronicle*, 27 November 1952.
- McClenny, Faith. "Metaline Falls Bridge." Unknown publication, no date.
- "Minneapolis Firm Awarded Heron Bridge Bond Issue." Sanders County Independent Ledger, 17 January 1951.

Heron Bridge HAER No. MT-142 (page 12)

"Notice of Sale of County Bridge Bonds." Sanders County Independent Ledger, 3 January 1951.

"Old Bridge Again in Service." Metaline Falls News, 27 November 1952.

"Proceedings of the Board of County Commissioners of Sanders County." Sanders County Independent Ledger, 21 March 1951.

D. MISCELLANEOUS

Bridge Inspection File No. L45025001+00001. Montana Department of Transportation. Helena, Montana.

Rand McNally Official Auto Trails Map, 1923. Montana Department of Transportation. Helena, Montana.

United States Census Records: Sanders County. 1910 - 1930. Viewed at www.ancestry.com.

Heron Bridge HAER No. MT-142 (page 13)

